

S/105/65/000/002/003/003
E192/E382

AUTHOR: Gorbachev, G.N., Engineer

TITLE: Two circuits for electronic (contact-less) control
of magnetic amplifiers

PERIODICAL: Elektrichestvo, no. 2, 1963, 83 - 85

TEXT: Amplifiers provided with very strong negative feedback have the useful property that their gain is inversely proportional to the "magnitude" of the feedback. Thus, if in the absence of feedback the gain of the amplifier is K_p , the feedback coefficient is β . The gain with the feedback is given by:

$$K_3 = \frac{1}{\beta + \frac{1}{K_p}} \quad (1)$$

which becomes:

$$K_3 = 1/\beta$$

Card 1/3

S/105/63/000/002/003/003
E192/E382

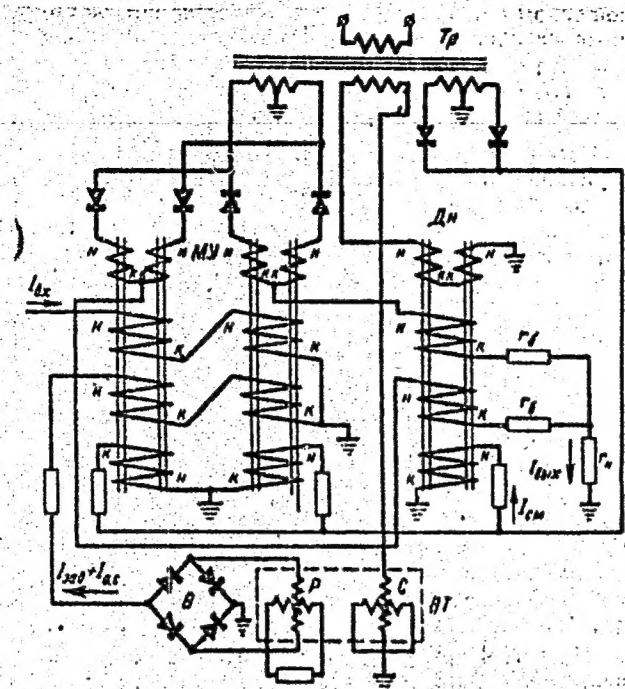
Two circuits for

provided $\beta \gg 1/K_p$. This property was employed by the author to devise a magnetic amplifier with variable gain (Author's Certificate no. 151990). The amplifier is shown in Fig. 2. The system is supplied by the transformer T_p . The compensating circuit of the amplifier includes a saturated reactor ΔH , a rotary transformer (reference device) BT and a rectifier B. The current of the reference device and the depth of the negative feedback are controlled by BT, which results in a corresponding change in both reference current and feedback coefficient β . A system for electronic closing of magnetic amplifiers is also given. This is based on disconnecting the supply voltage by introducing controlled reactors into the AC branches of the amplifier. However, this system is not suitable for closing the amplifiers which have no common AC paths. In a practical system based on this method the output difference current during the closure did not exceed 3% of the nominal value. There are 6 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power-engineering Institute)

SUBMITTED: September 4, 1962
Card 2/3

Fig. 2:



Card 3/3.

Two circuits.. E192/E382
S/105/63/000/002/003/003

"APPROVED FOR RELEASE: 06/13/2000

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NO REF SOV 000
Card 1/1

OFFER: 000

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000516020018-8"

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; GORBACHEV, G.N., aspirant

Transistorized control networks of multiphase autonomous inverters.
Trudy MEI 55:65-72 '65. (MIRA 18:10)

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; GORBACHEV, G.N., aspirant;
SAVEL'YEVA, A.A., inzh.

Transistorized frequency converter for the power supply of fluorescent
lamps. Trudy MEI 55:73-80 '65. (MIRA 18:10)

L 9663-66 EWT(d)/EWP(1) LJP(c) BB/GG

ACC NR: AP5026506

SOURCE CODE: UR/0286/65/000/019/0036/0036

AUTHORS: Gorbachev, G. N. ⁴⁴ Labuntsov, V. A. ⁴⁴

ORG: none

TITLE: Ring shift register. Class 21, No. 175118

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 36

TOPIC TAGS: shift register, transistorized circuit

ABSTRACT: This Author Certificate presents a ring shift register of thyristors with capacitor switching, which produces scaling an even number of times. To increase the reliability and to decrease the required power, the load is connected in series with the capacitor between the anodes of thyristors operating in phase-opposition (see Fig. 1). Diodes are connected antiparallel to the thyristors.

Card 1/2

36
B
UDC: 621.314.572 07

L 9663-66

ACC NR: AP5026506

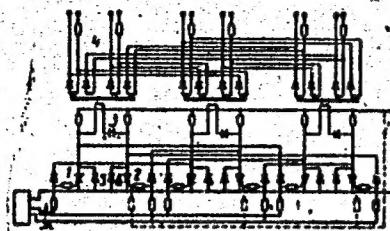


Fig. 1. 1 and 2 - Thyristors;
3 - switching capacitor;
4 - load; 5 and 6 - diodes.

Orig. art. has: 1 diagram.

SUB CODE: 09/

SUBM DATE: 06Jan64

Card 2/2

1. GORBACHEV, G. T. and MASLENNIKOV, K. V.
2. USSR (60₀)
4. Paper-Making Machinery
7. Automatic regulator of the beating of pulp in hollanders. Bum.prom.2⁷no. 10, 1952.

9. MOonthly List of Ruasian Accessions, Library of Congress, February 1953, Unclassified.

V'YUNOV, V.; SHIMANOVA, Z.; GORBACHEV, I.

Leather substitutes made of nitrocellulose. Pozh.delo 5 no.4:
11:12 Ap '59. (MIRA 12:5)

(Nitrocellulose)
(Leather substitutes)

GORBACHEV, I., inzh.; KUZNETSOV, V., inzh.

The L-36 carburetor. Za rul. 19 no.12:10-11 D '61.
(MIRA 14:12)

1. Leningradskiy karbyuratornyy zavod.
(Motocycles—Motors—Carburetors)

GORBACHEV, I.

Patrons give aid. NTO 4 no.5:35 My '62. (MIRA 15:5)

1. Zamestitel' predsedatelya Altayskogo krayevogo soveta
Nauchno-tekhnicheskikh obshchestv.
(Altai Territory—Farm mechanization)

GORBACHEV, I.

After the report. NTO 6 no.2:25-26 F '64. (MIRA 17:4)

1. Zamestitel' predsedatelya Altayskogo krayevogo soveta nauchno-tekhnicheskikh obshchestv.

GORBACHEV, I. D.,

1958/Biology - Fertilizers
Plants, Nutrition

"Results of Testing a New Phosphorous Fertilizer -
"Thermophosphate," I. D. Gorbachev, All-Union Sci-
Res Inst of Plant Studies

"Dok v-5 Ak Selkhoz Nauk" No 10, pp 35-38

Shows by series of tests conducted 1946 - 1949 that
"thermophosphate" is fertilizer equal to superphos-
phate on mineral podsol and superior on peat bog soils.
On mineral soils it should be added before tilling to
be more accessible to plants. Use of "thermophosphate"
permits high yields on acid-surface bog soil without
use of special neutralizers. Submitted 31 Mar 50.

Oct 50

173T22

GORBACHEV, Ivan Fedorovich; DROBYSHEV, D.V., prof.red.; CHIZHOV, A.A.,
vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Key wells of the U.S.S.R.; Rybinskoye key well (Krasnoyarsk Territory)] Opornye skvazhiny SSSR; Rybinskaia opornaia skvazhina (Krasnoyarskii krai). Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Leningr. otd-nie. 1961. 117 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.175). (MIRA 14:12)

(Rybinskoye region (Krasnoyarsk Territory)--Petroleum geology)
(Rybinskoye region (Krasnoyarsk Territory)--Gas, Natural--Geology)

GORBACHEV, I.F.; PETUKHOV, A.V.; TIMOFEEV, A.A.

Geology of the Zeya-Bureya Plain. Neftegaz. geol. i geof. no.5:
1965. (MIRA 18:7)

1. Trest "Vostsibneftegeofizika".

L 10398-63

EWP(q)/EWT(m)/BDS--AFFTC/ASD--JD

ACCESSION NR: AP3002249

S/0128/63/000/006/0010/0012

AUTHOR: Yazovskikh, I. M.; Gorbachev, I. M.; Bukin, Yu. A.

55

TITLE: Heat-resistant Cr-Mn steel for cast furnace parts

SOURCE: Liteynoye proizvodstvo, no. 6, 1963, 10-12

TOPIC TAGS: Cr-Mn steel, heat-resistant steel, fluidity, hot cracking susceptibility, oxidation resistance, mechanical properties, applications

ABSTRACT: The Chelyabinsk NIPTIAMMASH has developed a nickelfree heat- and oxidation-resistant Cr-Mn steel for cast parts of furnaces working at 800--1100C. The best combination of mechanical properties was obtained in as-cast (not heat-treated) steel containing 0.55--0.65% C, 2.0--2.5% Si, 15--17% Mn, 15--17% Cr, and 0.30--0.60% Ti, deoxidized in a ladle with 0.2% Al and poured at 1500C. Mechanical properties of Cr-Mn steel at 20, 800, and 950C compared with those of Cr-Ni steels Kh18N9L [cast AISI-302] and Kh18N20S2I [cast, 18% Cr, 20% Ni, 2% Si] are shown in Table 1 of Enclosure. Oxidation resistance of Cr-Mn steel up to 800C is lower than Cr-Ni and Cr-Ni-Si steels, but with temperature increased to 950C the difference diminishes. Castability of the new steel is better and susceptibility to hot cracking lower than those of Cr-Ni and Cr-Ni-Si steels.

Card 1/2

YAZOVSKIKH, I.M.; BUKIN, Yu.A.; GORBACHEV, I.M.

Effect of deoxidizers on the mechanical properties of low-alloy
steel. Lit. proizv. no.10:3-4 0 '63. (MIRA 16:12)

L 23063-65 EWP(m)/EWA(d)/EWP(t)/EWP(b) MJW/JD

ACCESSION NR: AR4038998

6/0277/64/000/004/0007/0007

SOURCE: Ref. zh. Mashinostr. mat. konstr. i raschet detail. mash. Otd. vyp., 26
vyp. 4, 48, 48

AUTHOR: Yazovskikh, I. M.; Gorbachev, I. M.; Bukin, Yu. A.

TITLE: Chromium-manganese heat resistant steel for furnace accessory castings

CITED SOURCE: Sb. Novoye v liteyn. protz-va. Gor'kily, 1963, 136-144

TOPIC TAGS: furnace accessory casting, chromium manganese steel, heat resistant

TRANSLATION: Chromium-manganese steel containing 15-17% Cr and 15-17% Mn has a composition approaching that of the Cr-Ni steels Kh18N9 and Kh18N25S2, and can be used as a substitute material in the manufacture of heat resistant furnace accessories operating at 600-1000 °C.

SUB CODE: MM, 1E

ENCL: 00

Card

1/1

"APPROVED FOR RELEASE: 06/13/2000

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CIA-RDP86-00513R000516020018-8"

ZOLOTNITSKIY, N.D., kandidat tekhnicheskikh nauk, dotsent; YAICHKOV, K.M., kandidat tekhnicheskikh nauk, dotsent; SOLOV'IEV, N.V., kandidat tekhnicheskikh nauk, dotsent, retsenzent; TARASOV-AGALAKOV, N.A., kandidat tekhnicheskikh nauk, retsenzent; DUVANKOV, G.S., inzhener, retsenzent; ARDANSKIY, A.S., inzhener, retsenzent; LAVROV, D.P., inzhener, retsenzent; KUPRIYANOV, Ye.M., kandidat tekhnicheskikh nauk, redaktor; GORBACHEV, I.N., inzhener, redaktor.

[Safety techniques and fire-prevention techniques in construction]
Tekhnika bezopasnosti i protivopozharnaya tekhnika v stroitel'stve.
Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1952. 350 p.
(MLRA 7:6)

(Building--Safety measures) (Fire prevention)

ARKHIPOV, I. N.; BULOUS, A. A.; YAICHKOV, K. M., kandidat tekhnicheskikh
nauk, rezaenzent; GOERBACHEV, I. M., inzhener-polkovnik, redaktor;
SHPAYER, A. L., redaktor; LIUDKOWSKAYA, N. I., tekhnicheskiy redak-
tor.

[Fire prevention in enterprises of the building materials industry]
Pretrivepozharnaya tekhnika na predpriyatiakh promyshlennosti strel-
tel'nykh materialov. Izd. 3-e, dop. i ispr. Moskva, Gos.izd-vo lit-ry
po strel. materialam, 1955. 254 p. (MIRA 9:5)
(Building material industry) (Fire prevention)

~~GORBACHEV, Ivan Nikolayevich; VERESKUNOV, V.K., redaktor; VINOKUROVA, Ye.B.,~~
~~redaktor izdatel'stva; KONYASHINA, A.D., tekhnicheskiy redaktor~~

[Manual for district fire inspectors] Posobie dlja raiionnykh pozhar-
nykh inspektorov. Moskva, Izd-vo M-va komun.khоз. RSFSR, 1957. 211 p.
(Fire prevention--Inspection) (MLR 10:9)

GORBACHEV, I. (Moskva); SOLDATOV, V (Serpukhov); MALYKHIN, M. (Kemerovo).

Evaluating the work of State Fire Inspection agencies. Posh.delo
3 no.8:9 Ag '57. (MLRA 10:8)
(Fire prevention--Inspection)

NIKITIN, Lev Ivanovich; PROKOP'YEV, Petr Sergeyevich; VINOGRADOV, Ievgeniy Grigor'yevich; GORBACHEV, I.N., inzh.-polkovnik, retsenzent; PITERMAN, Ye.P., red. izd-va; PARAKHINA, N.L., tekhn. red.

[Fundamentals of fire prevention] Osnovy protivopozharnoi tekhniki. (MIRA 14:6)
Moskva, Goslesbumizdat, 1960. 310 p.
(Fire prevention)

GORBACHEV, I.N.; BALAKIN, V.M., red.; SHESHNEVA, E.A., tekhn. red.

[Voluntary fire control societies] Dobrovol'nye pozharnye obshchestva; iz opyta raboty. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1962. 43 p.

(MIRA 15:12)

(Fire prevention)

SHIMANOVA, Zinaida Yegorovna; BELKIN, R.S., doktor yurid. nauk,
red.; GORBACHEV, I.N., red.; ZLOBINA, Z.P., red.izd-va;
MAYOROV, V.V., tekhn. red.

[Technical expert examination of the causes of fires] Po-
zharno-tehnicheskaiia ekspertiza. Moskva, Izd-vo kommun.
khoz.RSFSR, 1963. 85 p. (NIRA 16:12)
(Fire investigation)

BORISOV, Vasiliy Matveyevich; GORBACHEV, I.N., red.; MYAKUSHKO,
V.P., red.izd-va; KARLOVA, G.L., tekhn. red.

[Fire prevention at enterprises of the woodworking
industry] Pozharnaia okhrana na predpriatiakh derevo-
obrabatyvaiushchih promyshlennosti. Moskva, Goslesbum-
izdat, 1963. 101 p. (MIRA 17:2)

KUTUKOV, A.I., red.; GARKALENKO, K.I., red.; GORBACHEV, I.V., red.; YERMAKOV, P.I., red.; OVSYANNIKOV, Yu.N., red.; PILYUGIN, B.A., red.; RODIONOV, I.S., red.; RODIONOV, A.N., red.; SEREBRIN, I.Ya., red.; GUSEV, M.S., red. izd-va.; PROZOROVSKAYA, V.L., tekhn. red.; SABITOV, A., tekhn. red.

[Uniform safety rules for geological surveying; compulsory for all ministries, economic councils, departments, organizations, and enterprises conducting geological studies] Edinyye pravila bezopasnosti pri geologorazvedochnykh rabotakh; obiazatel'nyy dlja vsekh ministerstv, sovnarkhozov, vedomstv, organizatsii i predpriiatii, vedushchikh geologicheskie raboty. Moskva, Ugletekhnizdat, 1958. 102 p. (MIRA 11:12)

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniem rabot v promyshlennosti i gornomu nadzoru.
(Geological surveys)

GORBACHEV, I. V.

USSR/Engineering - Steel brittleness

Card 1/1 Pub. 128 - 26/32

Authors : Gorbachev, I. V.

Title : The first investigation of the blue brittleness of the steel

Periodical : Vest. mash. 11, 93-94, Nov 1954

Abstract : An account is given of a Polish language article written by A. A. Rzeszotarski, in 1880, confirming the first investigation of the blue brittleness of steel by Russian metallurgist D. K. Chernov, in 1877 at the Obukhovskiy Metallurgical Factory. Three references: 1-USSR and 2-Polish (1878-1887).

Institution : ...

Submitted : ...

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CIA-RDP86-00513R000516020018-8

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000516020018-8"

GORBACHEV, I.V.

AUTHOR: Gorbachev, I.V., Candidate of Technical Sciences 128-58-5-14/16

TITLE: A.S. Lavrov's Work on Copper Alloys (Raboty A.S. Lavrova po mednym splavam)

PERIODICAL: Liteynoye Proizvodstvo, 1958, Nr 5, pp 28-30 (USSR)

ABSTRACT: The article is written on the occasion of the 120th anniversary of the birth of A.S. Lavrov, an outstanding Russian metallurgist whose work on non-ferrous alloys are less widely known than his work on the structure and properties of steel ingots. There are 15 references, 13 of which are Russian and 2 French.

AVAILABLE: Library of Congress

Card 1/1

GORBACHEV, I.V., kand.tekhn.nauk, dots.; PODSUSHNYY, A.M., red.

[Analysing the graphitisation process] K analisu protsesssa grafitisatsii.
Vladivostok, 1959. 8 p. (Vladivostok. Dal'nevostochnyi politekhnicheskii
institut. Trudy, vol.52, no.7) (MIRA 14:4)
(Steel—Metallurgy) (Diffusion hardening)

GORBACHEV, I.V., kand. tekhn. nauk, dotsent; DEMENT'YEVA, L.Ya., starshiy
prepodavatel'

Eutectoid interval of some engineering cast irons. Trudy DVPI
56 no.1:107-110 '62. (MIRA 17:6)

ACC NR: AP6035941

SOURCE CODE: UR/0413/66/006/020/0199/0199

INVENTOR: Adler, M. V.; Gorbachev, L. M.; Lapavok, V. S.; Lovchev, S. V.; Sokolov, G. I.; Frenk, M. Ts.; Churikov, Ye. P.

ORG: none

TITLE: Ventilating unit for aircraft. Class 62, No. 187540

SOURCE: Izobreteniya, promyshlennyye obraztsey, tovarnyye znaki, no. 20, 1966, 199

TOPIC TAGS: aircraft cabin environment, aircraft cabin equipment, centrifugal blower, air conditioning equipment

ABSTRACT: An Author Certificate has been issued for a ventilating unit for aircraft which contains a fan with a drive. To assure the unit's efficient operation in ground-based and airborne applications, the fan is mounted on a separate shaft and is operated by an electric drive through an axial over-riding clutch; a centrifugal clutch is used for operation on turbine drive. [WA-98]

SUB CODE: 01, 13/ SUBM DATE: 10Feb64

Card 1/1

UDC: 629.13.01/06

ACC NR: AP6035839

(A,N)

SOURCE CODE: UR/0413/66/000/020/0044/0044

INVENTOR: Baranov, N. V.; Gorbachev, L. M.; Orlov, I. Ye.; Sokolov, G. I.; Solov'yeva, G. S.

ORG: None

TITLE: A turborefrigerator. Class 17, No. 187050

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 44

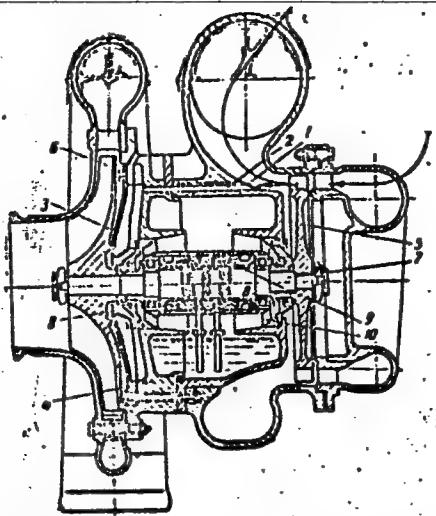
TOPIC TAGS: refrigeration equipment, turbine, ventilation fan

ABSTRACT: This Author's Certificate introduces a turborefrigerator for pressurized cabins and instrument sections of aircraft. The installation contains a housing, turbine and blower all mounted on a shaft set in air-cooled ball bearings. The unit is designed for improved cooling and reduced weight. Longitudinal cooled air supply channels are made in the housing at the level of the turbine blade base. These channels communicate with the cavity between the screen and the cover. The shaft bearings are mounted on the ends of a thin walled housing with reinforced flanges which have sloping holes for coolant circulation.

Card 1/2

UDC: 621.565.94 629.13.01/06

ACC NR: AP6035839



1—housing; 2—channels; 3—screen; 4—cover; 5—turbine; 6—blower; 7—shaft; 8—ball bearings; 9—tube with reinforced flanges; 10—holes

01/13/10
SUB CODE: 01/13/10 SUBM DATE: 21Nov64

Card 2/2

GORBACHEV, L.N.

Methods of reducing sugar production costs used in the Livny sugar refinery. Sakh.prom. 37 no.2:51(131)-52(132) F '63. (MIRA 16:5)

1. Livenskiy sakharnyy zavod.
(Livny—Sugar industry—Costs)

GORBACHEV, L.N.

Some problems in the planning of gross production. Sakh.prom.
37 no.6:53-54 Je '63. (MIRA 16:5)

1. Livenskiy sakharnyy zavod.
(Sugar industry--Management)

DVORKIN, G.A.; GOLUB, Ye.I.; GORBACHEV, L.P.; KORENEVA, L.G.;
MEKSHENKOV, M.I.

Dispersion of the optic rotation of deoxyribonucleic acid isolated
from T-2 bacteriophages. Dokl. AN SSSR 151 no.5:1211-1214 Ag
'63. (MIRA 16:9)

1. Institut biologicheskoy fiziki AN SSSR. Predstavлено академиком
A.N.Belozerskim.
(Bacteriophage) (Nucleic acids)

GORBACHEV, M.

Not only uncover, but prevent shortcomings and violations as
well. Fin. SSSR 23 no.10:62-66 0 '62. (MIRA 15:10)

1. Chlen Kollegii Ministerstva finansov Belorusskoy SSR.
(White Russia—Auditing and inspection)

31018. CORBACHEV, M. G.

Gematogennyy osteomie lit pozvonochika. Khirurgiya, 1949, No. 9, s. 71-77

GORBACHEV, M. P.

GORBACHEV, M.P.; KUDRIAVTSEVA, V.S.; FROLOVA, T.A.

Remarks on N.I.Truevtsaev's book "Mechanical technology of fiber materials". M.P.Gorbachev, V.S.Kudriavtseva, T.A.Frolova. Tekst. prom. 14 no.5:52-54 My '54. (MIRA 7:6)
(Truevtsaev, N.I.) (Textile industry)

GORBACHEV, Mikhail Sergeyevich

GORBACHEV, Mikhail Sergeyevich (Ukrainian Sci Res Psychoneurological Inst), Academic degree of Doctor of Medical Sciences, based on his defense, 16 June 1955, in the Council of the Khar'kov State Med Inst, of his dissertation entitled: "Unjuries of the spinal column and the spinal cord caused by explosions, in the late stage."

Med.

For the Academic Degree of Doctor of Sciences.

Byulleten' Ministerstva Vysshego Obrazovaniya SSSR, List No.7, 31 March 1956
Decision of Higher Certification Commission Concerning Academic Degrees and Titles.

JPRS 512

GORBACHEV, M.S., doktor med.neuk, BONDAR', V.P.

~~Use of neocicide in treating brain tumors. Vrach.delo no.38235-237~~
~~Mr'58~~ (MIR 11:5)

1. Neurokhirurgicheskaya klinika Ukrainskogo nauchno-issledovatel'skogo psichonervologicheskogo instituta i Khar'kovskaya psichonevrologicheskaya bol'nitsa.
(ANTIBIOTICS)
(BRAIN-TUMORS)

CHIBUKMAKHER, Naum Borisovich, prof.; GORBACHEV, Mikhail
Sergeevich, prof.; SHAMOV, V.N., zas. deyatel' nauki,
prof., red.[deceased]; LITVAK, L.B., zas. deyatel' nauki
prof., red.; PANCHENKO, D.I., red.

[Atlas of surgery on the spinal cord] Atlas operatsii na
spinnom mozgu. Kiev, Zdorov'ia, 1965. 147 p.
(MIRA 18:4)

GORBACHEV, M.T.

Inspection of the organization of production.
Mashinostroitel' no.6:46 Je '60. (MIRA 13:8)
(Klimovsk—Machinery industry)

GORBACHEV

SHOTRITSKIY, Ye.; GORBACHEV, N.; GULNICH, I.D., redaktor; DMITRIYEV, P..
tekhnicheskyy PUBLIKATOR

[Antiaircraft machine gun] Zenitnyi pulemet. Moskva, Izd-vo DODARO,
1950. 75 p. [Microfilm] (MLB 7:11)
(Antiaircraft guns) (Machine guns)

GORBACHEV, N.A. (Saratov)

Mysticism instead of the truth. Nauka i zhizn' 28 no.1:30-36 Ja
'61. (MIRA 14:1)

(Religion) (Mathematics—Phylosophy)

GORBACHEV, N.I.

FEYERMARK, M.M., inzhener; YERMAKOV, A.S.; STOLYAREVSKIY, N.A., inzhener;
GOL'DENBLAT, B.I., inzhener; GURGENIDZE, D.P., inzhener; KOZLOV, A.P.,
tekhnik; GORBACHEV, N.I., tekhnik; GRINBERG, B.V., inzhener.

Protection of substation power transformers in industrial plants.
(MIRA 10:10)
Prom.energ. 12 no.10:29-33 0 '57.

1. Khar'kovskoye otdeleniye Gosudarstvennogo Proyektного Instituta
Tyazhpromelektroprojekt (for Feyermark). 2. Sverdlovskiy podship-
nikovyy zavod (for Yermakov). 3. Proyektnyy institut, Odessa (for
Gol'denblat). 4. Ust'-Kamenogorskiy svintsovo-tsinkovyy kombinat
(for Stolyarevskiy). 5. Tbilisskiy pryadil'no-trikotazhnyy kombinat
(for Gurgenidze). 6. Kamvol'nyy kombinat, Minsk (for Grinberg).
(Electric transformers)

GORBACHEV, N. M.; KOMISSAROV, N. S.; SOLOV'YEV, G. M., red.; GRIGOR'YEVA, A. I., red.; KOROLEV, A. V., tekhn. red.

[Training in car driving] Obuchenie vospredneniu avtomobilistov, Moskva, Izd-vo DOSAAF, 1962. 155 p. (MIRA 16:6)
(Automobile drivers—Education and training)

GORBACHEV, N. V.

"Application of Luminescence in Architecture," Iz. Ak. Nauk SSSR, Ser. fiz.,
13, No.2, 1949

All-Union Elec. Eng. Inst.

1. GORBACHEV, N. V.
2. USSR (600)
4. Electric Lighting, Fluorescent
7. Fluorescent lights and materials in units of architectural lighting.
Isv. AN SSSR, Ser. fiz. 15 №. 6, 1951.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

S. A. GORBACHEV, N. V.
Set. II

Optics, Spectra

333.371 / 621.327.43
7/83. Influence of temperature on the colour pro-
perty of the type "TB" fluorescent lamp. N. V.
Optics, Institute R. R. Ivanova, 24 Tcha. Fl. 24,
1925-30 (No. 9, 1931) in Russian.

An experimental investigation of a change of colour
in the "dissolve" pink to yellow of the type "TB"
("yellow white") fluorescent lamp, over the ambient
temperature range 25-60°C, showed the cause of the
change to be a change in the emission of the $\text{RaBa}(\text{NO}_3)_2$.

phosphor, combined with a relative intensification of
emission of the Mg vapour. N. V. GORBACHEV

1. GORBACHEV, N. V.
2. USSR (600)
4. Lighting, Architectural and Decorative
7. Lighting the facades of tall buildings. Izv AN SSSR. Otd tekh nauk. No. 11 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

GORBACHEV, N.V., kandidat tekhnicheskikh nauk; TSAR'KOV, V.M., inzhener.

Principles of lighting athletic installations in the Lenin Central Stadium. Svetotekhnika 2 no.6:1-8 N '56. (MLRA 9:12)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Stadiums) (Electric lighting)

GORBACHEV N. V.
GORBACHEV, N.V., kand. tekhn. nauk; YUROV, S.G., kand. tekhn. nauk.

The 1957 A.I.E. congress. Svetotekhnika 3 no.12:25-27 D '57.
(MIRA 11:1)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Lyons, France--Lighting--Congresses)

Gorbachev, N.V.

SUBJECT: USSR/Luminescence 48-4-47/48

AUTHOR: Gorbachev N.V.

TITLE: Devices for Ultraviolet Irradiation of Luminescent Dyes and Materials (Pribory dlya ul'trafioletovogo obлучeniya svetlyashchikhsya krasok i materialov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #4, pp 632-635 (USSR).

ABSTRACT: The VNISI, All-Union Scientific Research Lighting-Engineering Institute, has developed new types of devices for ultraviolet irradiation with quartz mercury vapor lamps and luminescent tubes of special types.

One of these devices named PUF-2 applies a quartz mercury lamp of the PRK-2 type having a power of 375 w. Its weight is 2.5 kg. At a distance of 1 m this device creates illumination of 100 to 120 μ w/sq cm.

The VNISI has developed two new types for the USSR Academy of Sciences: one of the desk type and the other of the suspended type.

Card 1/2

48-4-47/48

TITLE: Devices for Ultraviolet Irradiation of Luminescent Dyes and Materials (Pribory dlya ul'trafioletovogo oblucheniya svetyashchikhsya krasok i materialov)

The desk-type device, named PUF-5, contains 3 luminescent tubes with L-33 luminophore, 15 w each. Its weight is 9.5 kg. The intensity of ultraviolet irradiation at a distance of 300 mm from this device amounts to $220 \mu\text{w}/\text{sq cm}$.

The suspended-type device, named PUF-6, has a body with three 15-w luminescent tubes, a black uviol glass and a reflector.

A portable device of the PUF-7 type was designed for some investigations on luminescent substances and luminescent analysis under expedition conditions. It uses luminescent tube of a special UFO-4A type. Its weight is 1.9 kg together with a power supplying battery. The intensity of ultraviolet irradiation at a distance of 30 cm amounts to $8 \mu\text{w}/\text{sq cm}$.

The article contains 3 photos and 1 figure. The bibliography lists 2 Slavic (Russian) references. The report was followed by a short discussion.

INSTITUTION: All-Union Lighting-Engineering Institute

PRESENTED BY:

SUBMITTED: No date indicated.

AVAILABLE: At the Library of Congress.

Card 2/2

GORBACHEV, N.V.

48-5-50/56

SUBJECT: USSR/Luminescence

AUTHORS: Agranyan M.I. and Gorbachev N.V.

TITLE: Manufacture of Luminescent Multiplication Paints and Their Application for Luminescent Filming (Izgotovleniye svetyashchikhsya mul'tiplikatsionnykh krasok i primeneniye ikh pri lyuminestsentnykh kinos'yemkakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 763-770 (USSR)

ABSTRACT: Experimental research for the manufacture of luminescent paints was carried out and methods of their application in multiplication of movies were developed.

The basic raw material for the manufacture of luminescent paints are: zinc-sulfide and cadmium-sulfide luminophores produced by the "Krasnyy Khimik" plant, and lumogen produced by the Khar'kov Plant of Chemical Reagents.

As a result of experimentation, 24 paints were produced. They can well be photographed on the 3-layer color cinema-film. Ten of them are mixtures of luminophores and pigments, and

Card 1/3

48-5-50/56

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Application for Luminescent Filming (Izgotovleniye svetyashchikhsya mul'tiplikatsionnykh krasok i primeneniye ikh pri lyuminestsentnykh kinos'yemkakh)

were devised to contain saturated colors for filming in mixed light. Ten others were produced without pigments, and were devised for filming under ultraviolet illumination alone. The two-year experience of using them has shown that these paints fully met the requirements of multiple filming. They possess a good adhesion to celluloid sheets, sufficiently elastic, and dry quickly. The composition and color characteristics of these paints are given in Table 1 of the paper.

A comparison of conventional and luminescent paints used for cinema films led to a conclusion that luminescent paints gave colors of greater purity than the conventional ones.

The luminescent paints were used in several movies produced by the studio "Soyuzmul'tfil'm" (Union Multiplication Film) during the time from 1954 to 1956.

Luminescent paints are of special importance for representing such light effects as polar light, fireworks, rainbows, thunderstorms, etc.

Card 2/3

48-5-50/56

GORBACHEV, N.V.

"Trudy" of the All-Union Scientific Research Institute of
Cinematography and Photography. Zhur. nauch. i prikl. fot. i kin.
3 no.1:76-77 Ja-F '58. (MIRA 11:2)
(Cinematography) (Motion-picture projection)

~~GORBACHEV, N.V.~~, kand. tekhn. nauk; TSAR'KOV, V.M., inzh.

Decorative illumination of Moscow during the Sixth World Youth
Festival. Svetotekhnika 4 no.3:25-29 Mr '58. (MIRA 11:2)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Moscow--Lighting, Architectural and decorative)

GORBACHEV, N.V., kand.tekhn.nauk; GOREV, Z.M., kand.tekhn.nauk; YERMOLINSKIY, H.H., inzh.; POL' B, R.L., inzh.; KHAZANOV, V.S., kand.tekhn.nauk; SHIFFTEL', Ye.B., kand.tekhn.nauk; SHKLOVER, D.A., kand.tekhn.nauk; YUROV, S.G., kand.tekhn.nauk

Principal works of professor S.O. Maizel' in the field of lighting engineering. Svetotekhnika 6 no.7:1-9 Jl '60. (MIRA 13:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting) (Maizel', Sersei Osipovich, d. 1955)

BELOVA, L.T., kand.tekhn.nauk; GORBACHEV, N.V., kand.tekhn.nauk;
IVANOVA, N.S., kand.tekhn.nauk; KROL', TS.I., kand.tekhn.nauk;
OSTROVSKIY, M.A., kand.tekhn.nauk; SHEFTEL', Ye.B., kand.tekhn.nauk;
TSAR'KOV, V.M., inzh.

Proposed new version of "Norms on electric lighting."
Svetotekhnika 7 no.8:14-22 Ag '61. (MIRA 14:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting-Standards)

GORBACHEV, N.V., kand.tekhn.nauk; TSAR'KOV, V.M., inzh.

Outdoor and architectural lighting of the Hall of Congresses in the
Kremlin. Svetotekhnika 8 no.1:18-24 Ja '62. (MIRA 15:1)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Moscow--Kremlin--Lighting, Architectural and decorative)

GORBACHEV, N.V., kand.tekhn.nauk; GOREV, Z.M., kand.tekhn.nauk; KHAZANOV, V.S.,
kand.tekhn.nauk; SHEFTEL', Ye.B., kand.tekhn.nauk; SHKLOVER, D.A.,
kand.tekhn.nauk; YUROV, S.G., kand.tekhn.nauk; YERMOLINSKIY, N.N.,
inzh.; FOL'B, R.L., inzh.

Letter received by the editor of "Svetotekhnika." Svetotekhnika 8
no.1:30 Ja '62. (MIRA 15:1)
(Sight) (Electric lighting)

AYZENBERG, Yu.B.; GORBACHEV, N.V.; GOREV, Z.M.; DEMCHEV, V.I.;
YEFIMKINA, V.F.; IVANOVA, N.S.; KOMISSAROV, V.D.; MARKIZOVA, G.B.;
MESHKOV, V.V.; OSTROVSKIY, M.A.; RATNER, Ye.S.; SHEFTEL', Ye.B.;
YUROV, S.G.

Nikolai Nikolaevich Ermolinskii; obituary. Svetotekhnika 8
no.12:28 D '62. (MIRA 16:1)
(Ermolinskii, Nikolai Nikolaevich, 1894-1962)

GORBACHEV, D.M.

GORBACHEV, O.M.

~~Electrode holder simultaneous recording of electrocardiograms from
three chest leads. Vrach.delo supplement '57:32 (MIRA 11:3)~~

1. kafedra detskoy nevrologii (zav.-dots. I.P.Kononenko)
Khar'kovskogo meditsinskogo instituta.
(ELECTROCARDIOGRAPHY)

GORBACHEV, O.M.

Leads for an electrocardiograph. Vrach.delo no.7:745 Jl '59.
(MIRA 12:12)
1. Kafedra detskoy nevrologii (zav. - dotsent I.F. Kononenko) Khar'-
kovskogo mediteinskogo instituta.
(ELECTROCARDIOGRAPHY)

GORBACHEV, O.M.

Electrocardiograph electrodes. Vrach.delo no.8:861 Ag '59.

(MIRA 12:12)

1. Kafedra detskoy nevrologii (zav. - dotsent I.F. Kononenko) Khar'-
kovskogo meditsinskogo instituta.

(ELECTROCARDIOGRAPHY--EQUIPMENT AND SUPPLIES)

GORBACHEV, O.M.

Small dimensional rectifier for electrophoresis. Lab. delo 8
no.10257-58 '62
(MIRA 1724)

1. Kafedra nervnykh bolezney (zav. - prof. G.D. Leshchenko)
Khar'kovskogo meditsinskogo instituta.

LOCH, A. [Locs, A.]; GORBACHEV, P.; GRAUDIN, K. [Graudins, K.]

Development of industrial transportation in the Latvian
S.S.R. Vestis Latv ak no.2:21-31 '62.

1. Institut ekonomiki AN Latviyskoy SSR.

GORBACHEV, Pavel; PILIPYUK, V., red.; KORNIYENKO, T., red.

[Nurek today] Nurek segodnia. Dushanbe, Izd-vo "Irfon,"
1964. 34 p. (MIRA 18:3)

1. Sekretar' Nurekskogo gorodskogo komiteta kommunisticheskoy
partii (for Gorbachev).

P. D. GORBACHEV

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University. University of Illinois, 1956. 10th All-Nation Symposium on Spectroscopy. Materials of the 10th All-Nation Symposium on Spectroscopy, 1956. Vol. 2. Atomic Spectroscopy. University of Illinois, 1956. 560 p. [Series: IAEA Scientific Reports, Vol. 4 (5)] 3,000 copies printed.

Additional Supporting Agency: www.ams.org.

CONTENTS: This volume contains 177 scientific and technical studies of atomic spectroscopy presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutions and institutes, extensive bibliographies of Soviet and other sources, extensive cover many phases of Spectroscopy: Spectra of rare earths, electronic spectra of metals, methods for quantitative electron spectroscopy, physico-chemical methods for quantitative atomic production, physico-chemical dispersion in metal vapors, optics and spectroscopy, atomic and molecular dispersion in metal vapors, gas theory and the combustion theory, spectral analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables and atlases of spectral lines, spark spectrographic analysis, statistical study of variation of spectra of metals, spectrum analysis in curves, determination of traces of metals, spectrum analysis in metallurgy, spectrometry in metallurgy, and principles and methods of spectrometry in various industries.

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Materials of the 10th All-Union Conference (cont.)

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KABABASH, A.G.; PEYZULAYEV, Sh.I.; SLYUSAREVA, R.L.; SOTNIKOVA, N.P.;
SMIRNOVA-AVERINA, N.I.; SAMSONOVA, Z.N.; KRAUZ, L.S.; MORZOZOVA, G.G.;
ROMANOVICH, L.S.; SMIRENKINA, I.I.; LIPATOVA, V.M.; SAZANOVA, S.K.;
PUGACHEVA, L.I.; USACHEVA, V.P.; VORONOVA, Ye.P.; ~~GORBACHEV, P.D.~~
KOSTAREVA, F.A.; KOSTAREVA, N.T.; YALOVATSKAYA, A.P.; KUZNETSOVA, N.N.

Spectrochemical analysis of pure metals for impurities. *Fiz.*
shor. no.4:556-562 '58. (MIRA 12:5)
(Spectrochemistry)

GORBACHEV, P.P. (Tashkent)

Solar heating installations. Fis.v shkole 17 ne.2:17-21 Mr-Ap
'57. (MLRA 10:3)
(Solar heating)

YAGUDAYEV, M.D., red.; GORBACHEV, P.P., red.; AKHMEDOV, D.B., red.;
ULAN, F.V., red.; GOM'KOVAYA, Z.P., tekhn. red.

[Research on the utilization of solar energy] Issledova-
niia po ispol'zovaniu solnechnoi energii. Tashkent, Izd-
vo AN Uzb.SSR. No.1. 1963. 107 p. (MIRA 16:9)
(Solar energy)

GORBACHEV, P. S. and BABUSHKIN, V. S.

"How We Fulfilled the Annual Plan for Absolute Increase of Wired Radio Speakers," Vest. Svyazi, No.9, p. 20, 1953

Translation Trans No.533, 6 Apr 56

Gorbachev, P.S.

AUTHOR: Gorbachev, P. Head of the Gomel' Radio Club. 107-8-20/62

TITLE: Competition Chronicle (Khronika sorevnovaniya), Gomel'.

PERIODICAL: Radio, 1957, # 8, p 13, col 3 (USSR)

ABSTRACT: The Gomel' radio amateurs challenged the Minsk Provincial Radio Club to competition.

The Gomel' Radio Club will display 15 inventions of its radio amateur designers at the 14th All-Union Exhibition.

Interclub and provincial competition among wireless operators and ultra-short wave amateurs are also projected.

INSTITUTION: None

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 1/1

1. GORBACHEV, S.; KOCHER, S.
2. USSR (600)
4. Peat Industry
7. Using the TEK-2 potato digger for loading shredded peat. MTS 12 no.10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

MOSKATOV, P.; ZELENKO, G.; BORDADYN, A.; MAL'TSEV, B.; KIRPICHNIKOV, P.;
DONSKOY, G.; KARTSEV, S.; MOISSEYEV, P.; SAMOYLOV, P.; SHISHKOV, I.;
NAUGOL'NOV, A.; PAPERNOV, N.; GORBACHEV, S.; SHABLIYEVSKIY, G.;
GOLUBEV, S.

IA.T. Remizov. Prof.-tekhn. obr. 15 no.4:3 of cover Ap '58.
(Remizov, Iakov Terent'evich, d. 1958) (MIRA 11:5)

GORBACHEV, S.S., inzh.; KHANIN, Ye.M., inzh.; MOROZOV, N.F., inzh.;
RABINOVICH, Ye.M., inzh.; STROYEV, A.Ye., inzh.; FEL'MAN, Ya.M.,
inzh.; DOLGIKH, V.N., inzh.; ROGACHEV, S.A., inzh.; YAKUSHEV, A.A.

Dismountable plant for making and assembling house made of
large aerated concrete blocks. Rats.i izobr.predl.v stroi.
no.12:11-18 '59. (MIRA 13:5)

1. Glavnnyy inzhener Konstruktorskogo byuro po zhelezobetonnym
Glavmosoblastroymaterialov pri Mosoblispolkome (for Yakushev).
2. Konstruktorskoye byuro po zhelezobetonnym Glavmosoblastroyma-
terialov, Moskva, D'yakov per., d.4 (for all).
(Lightweight concrete) (Concrete blocks)

GORBACHEV, S. [deceased]; NIKITIN, N.; NESTEROV, Ya.

Method of working out standards for forging and stamping work.
Sots. trud 6 no. 2:91-97 F '61. (MIRA 14:2)
(Forge shops--Production standards)

SHONIN, I. (c. Chelyabinsk); LIKHOVIDOV, I. frezerovshchik (g. Ozhatsk);
HERCHENKO, Ye., master; GORBACHEV, S., tekhnolog; PONOMAREV, V.;
GORYUSHIN, A., kompressorschik (g. Moskva); SAZANTSEV, A., inzh.
-gidrotekhnik (g. Kemerovo); MUROMTSEVA, L., inzh. (g. Volgograd)

Suggested, achieved, introduced. Izobr. i rats. no. 12:22-23 D '61.
(MIRA 14:12)

1. Moskovskiy zavod po remontu ekskavatorov (for Borchenko,
Gorbachev). 2. Zamestitel' nachal'nika proizvodstvennogo otdela
kombinata Cherepovetsles (for Ponomarev).
(Technological innovations)

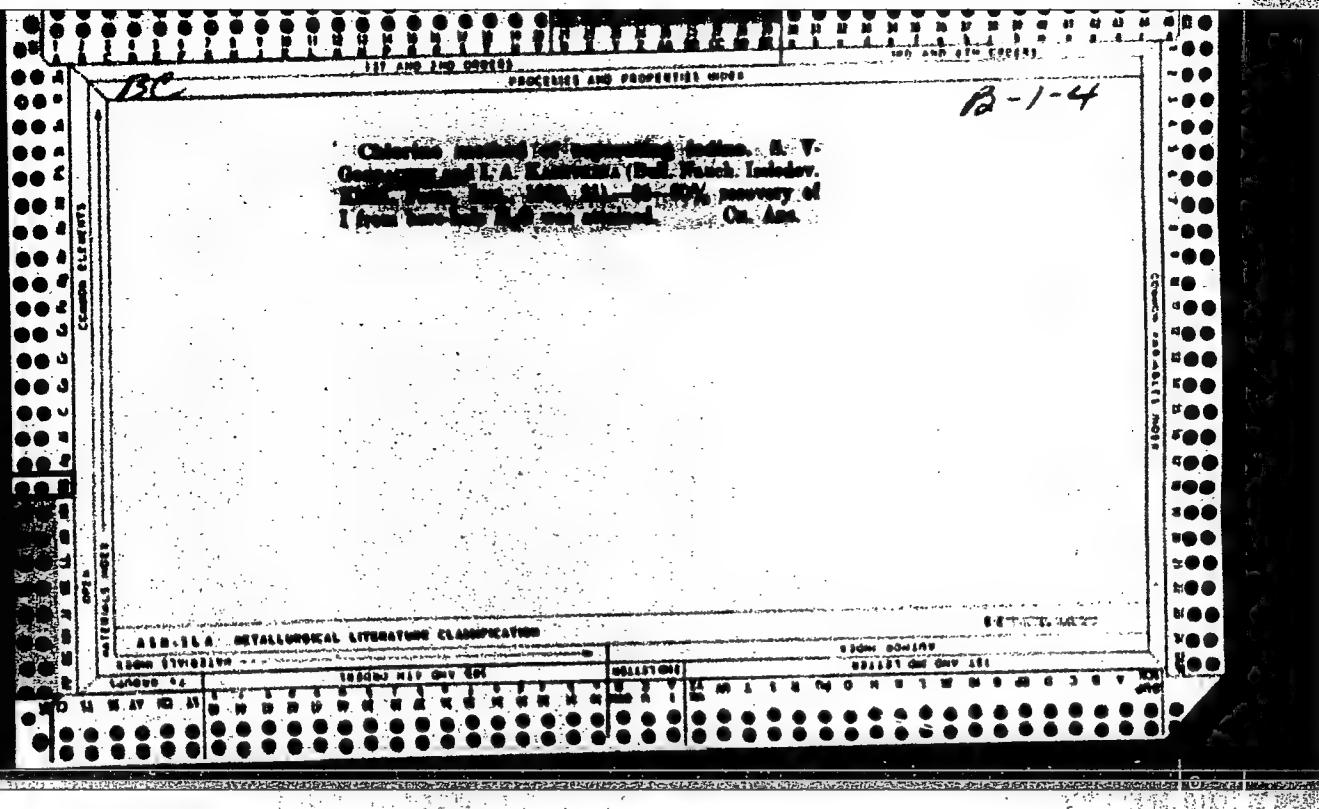
SULIMOV, Filaret Ivanovich; GORBACHEV, Sergey Mikhaylovich;
KRETOV, Pavel Yevseyevich; LIOGEN'KIY, German L'vovich;
VALISHCHANSKIY, V.M., red.; YELCHINA, L.A., red.izd-va;
KAZANSKAYA, L.I., tekhn.red.

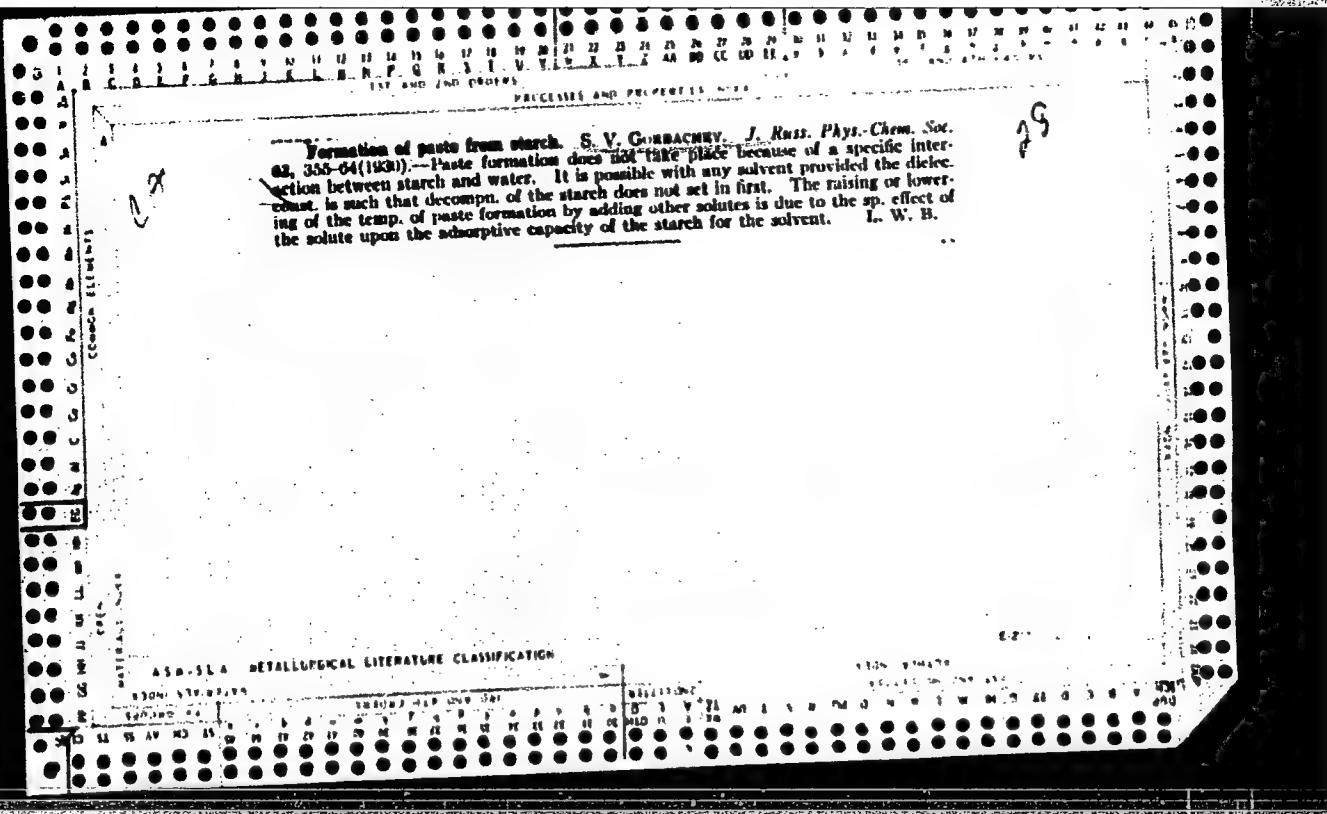
[Reorganization problems and forest management in Vologda
Province] Voprosy reorganizatsii i lesnoe khoziaistvo
Vologodskoi oblasti. Moskva, Goslesbumizdat, 1963. 74 p.
(MIRA 17:3)

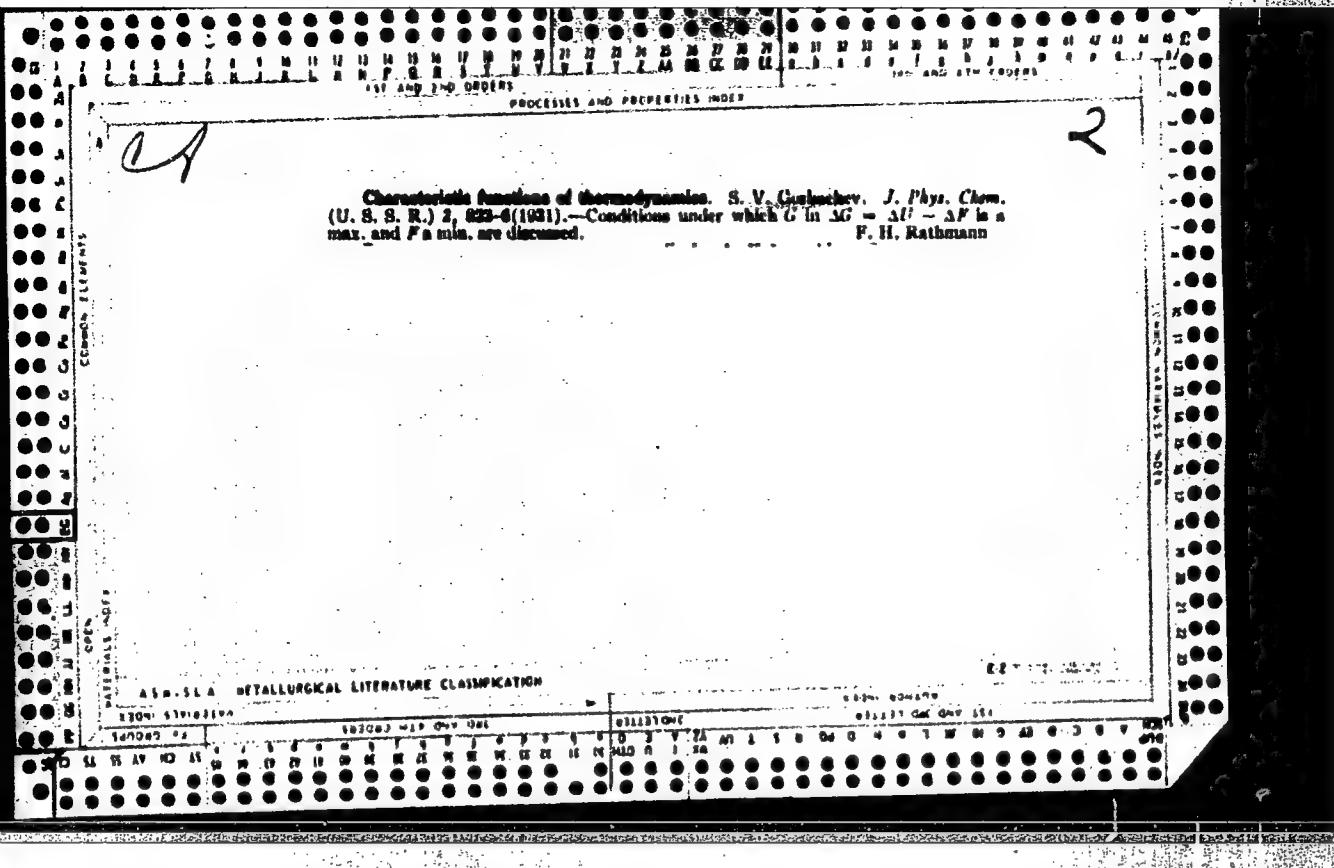
GORBACHEV, S.S., inzh.; PAVLOVA, A.I., inzh.

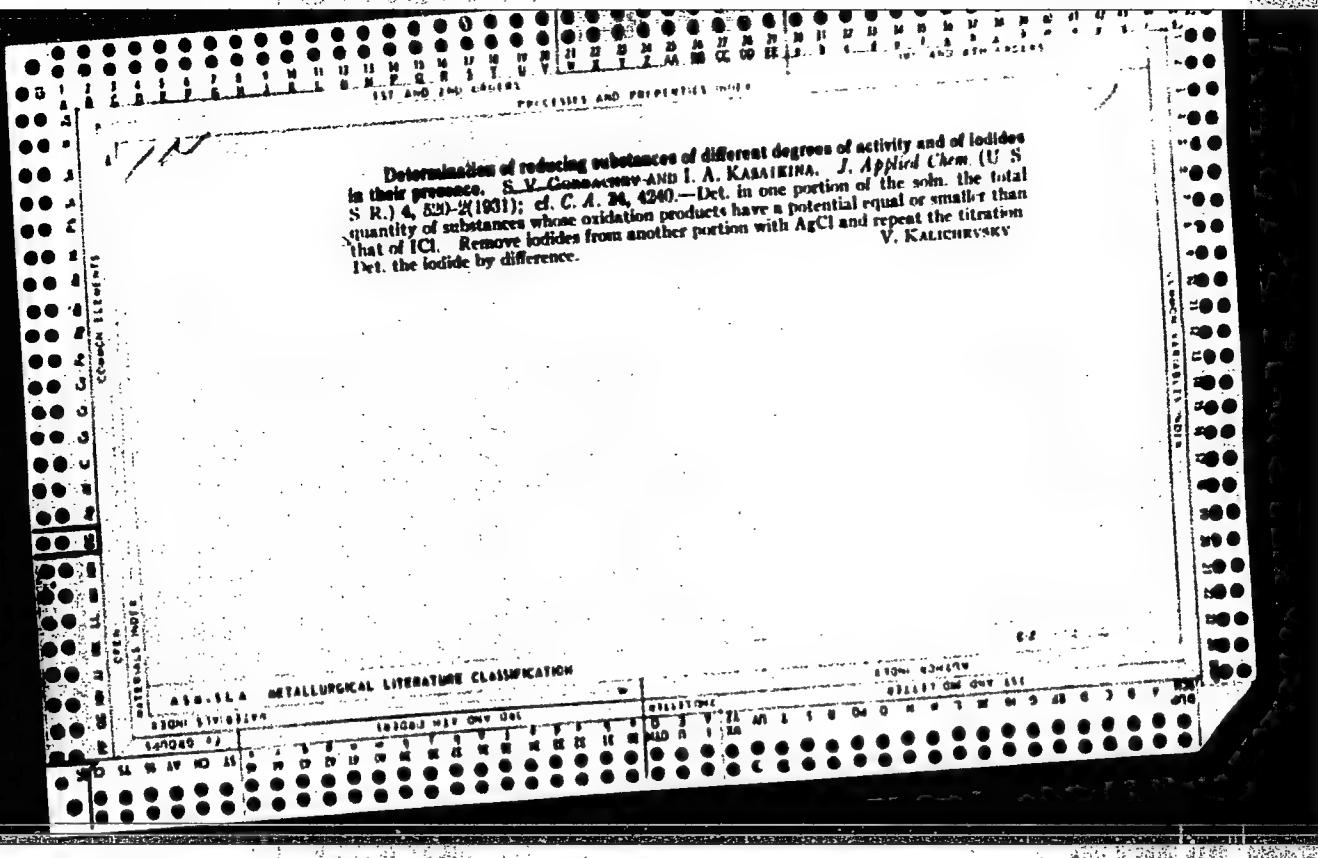
Manufacture of multilayer wall panels and requirements for the
materials used to make them. Stroi. mat. 7 no.9:3-5 S '61.
(MIRA 14:11)

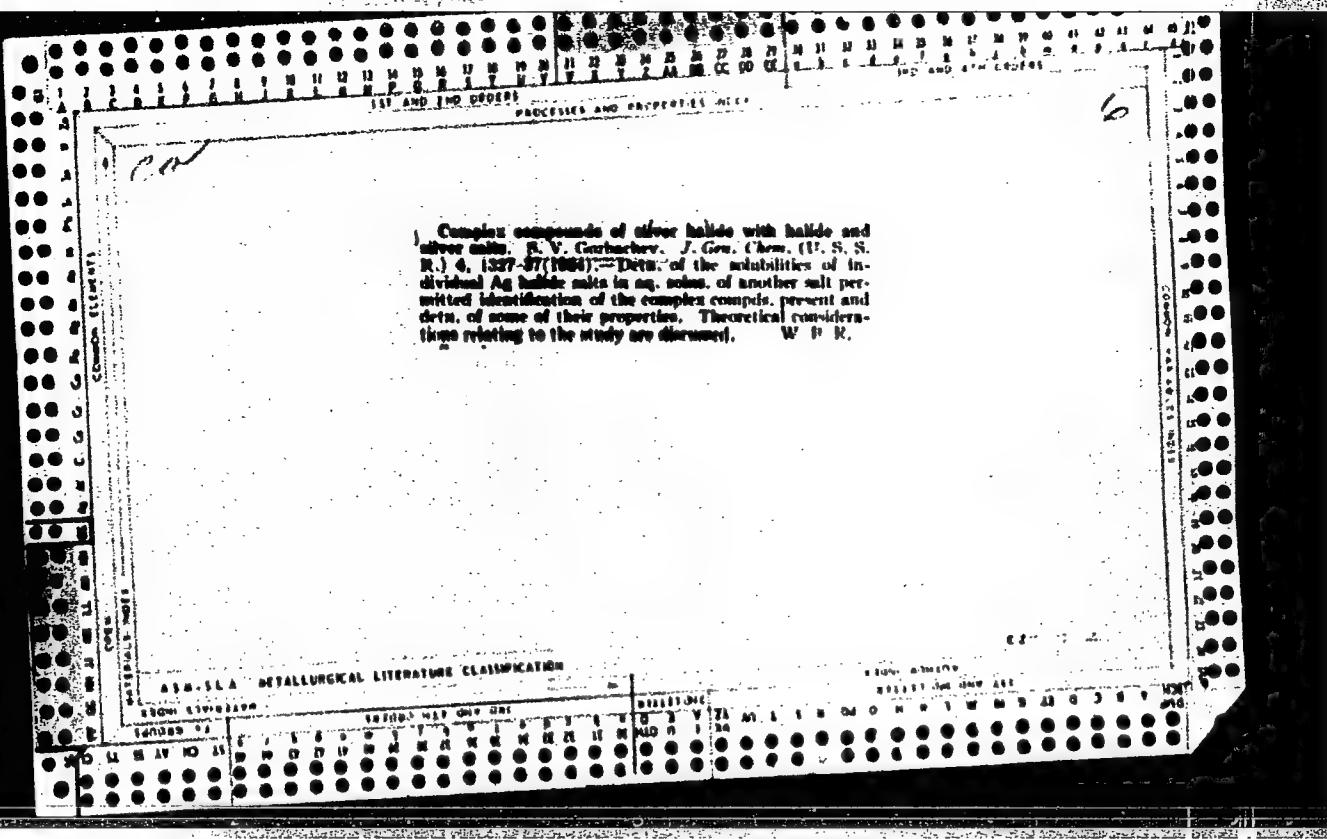
(Precast concrete) (Walls)

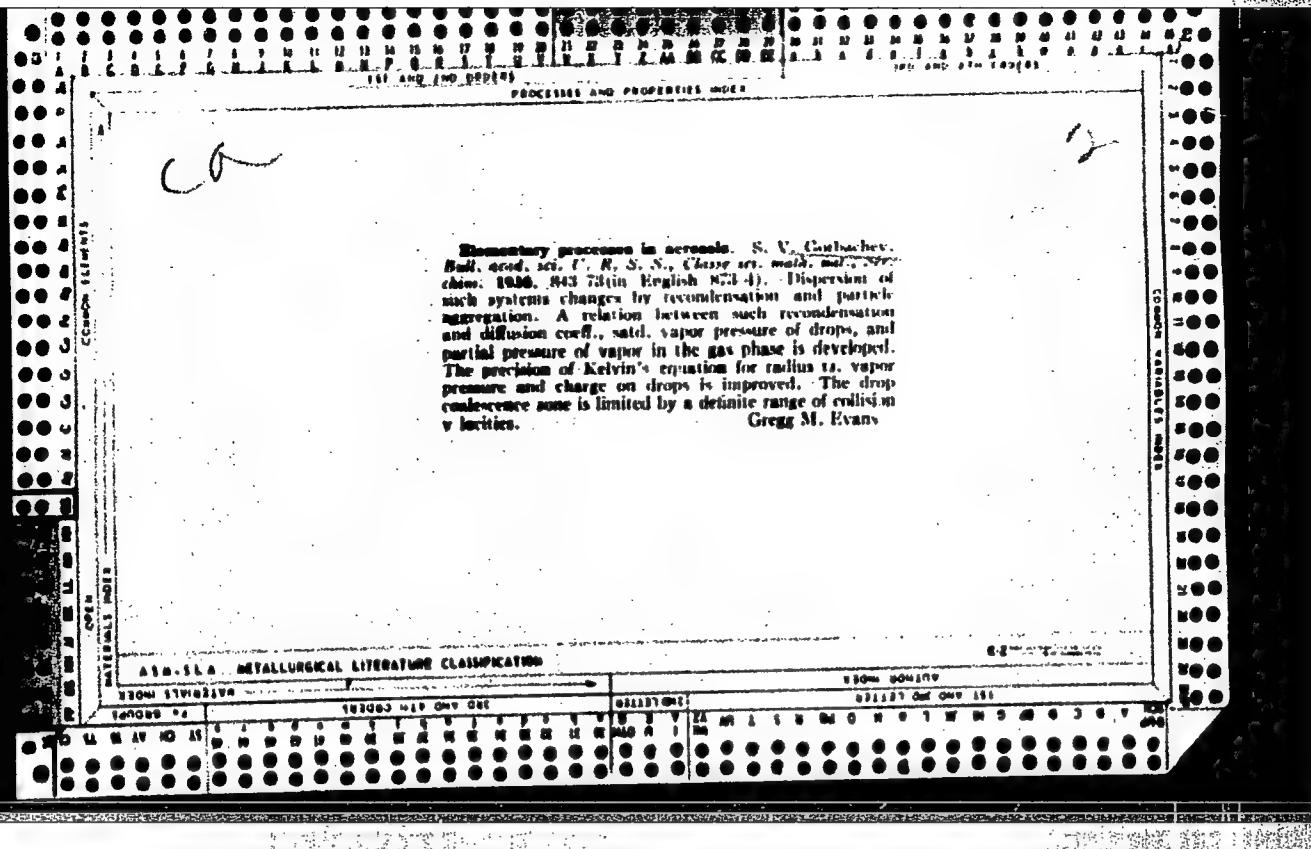


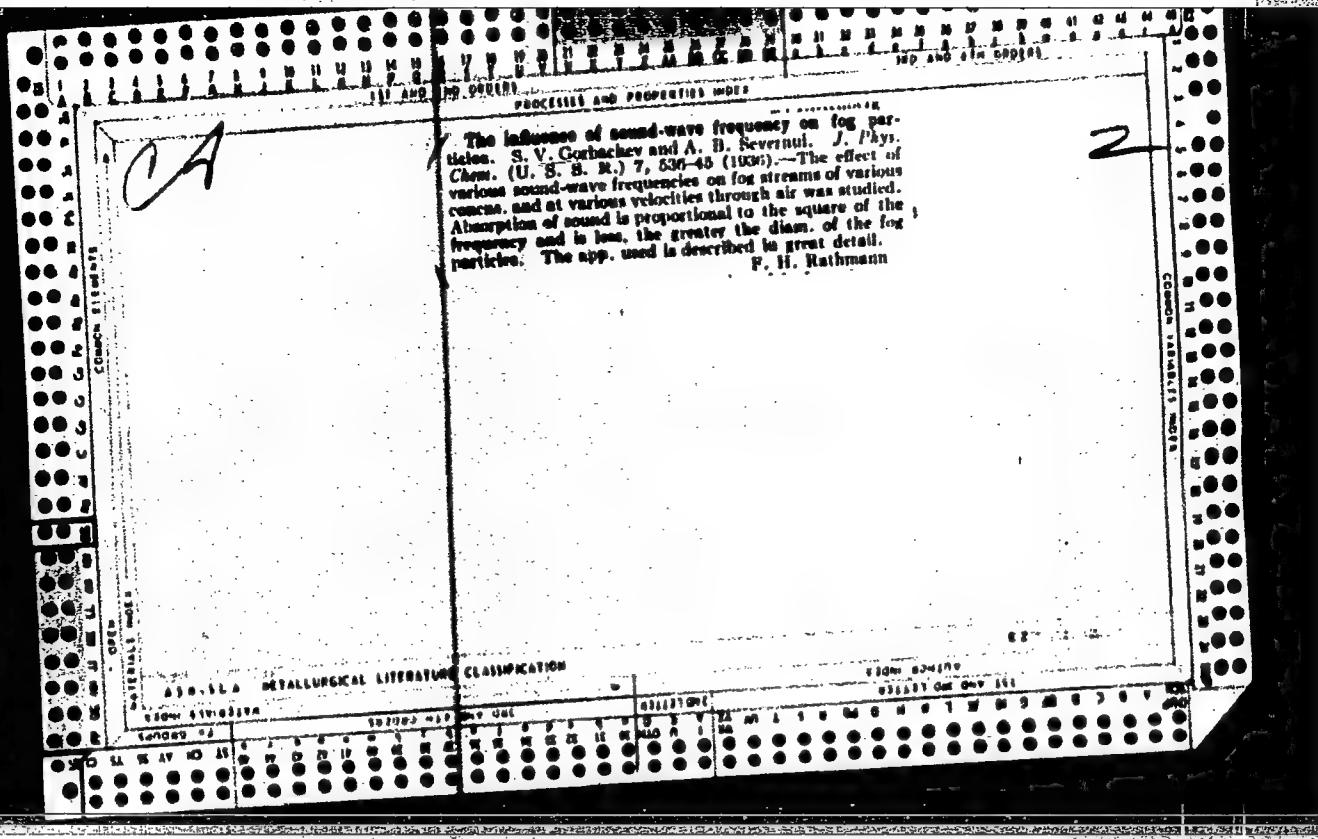


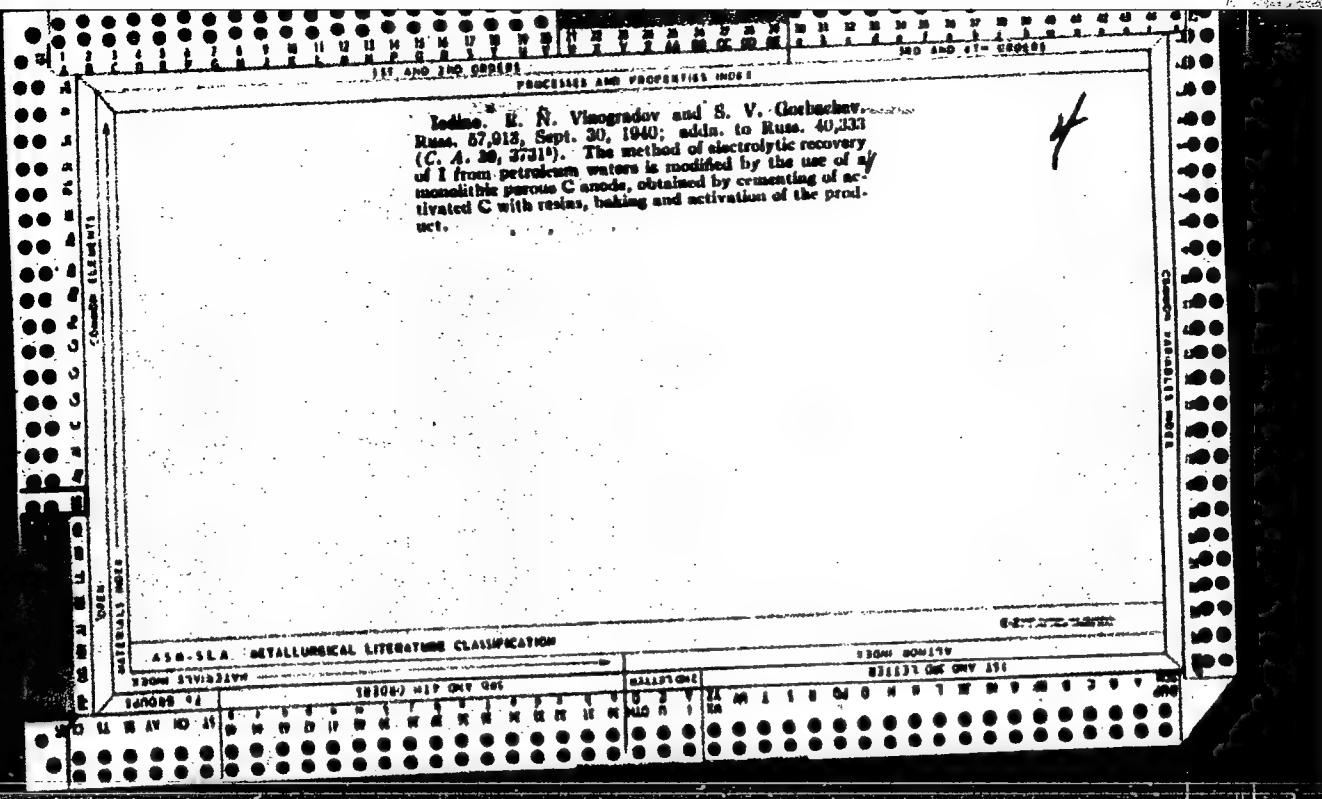












CA

Preparation of trivalent manganese. S. V. Godishev and R. E. Shpital'ski. *J. Gen. Chem. (U. S. S. R.)* 10, 1901-7 (1940).—The oxidation-reduction potential Mn^{3+}/Mn^{2+} depends on the concn. of H_2SO_4 . The effect of the acidity is caused by a no. of equil. reactions. The soln. yellow-pink at 2 N acid concn. (the yellow tint is caused by the presence of $Mn(OH)_2$) darkens on addn. of acid owing to Mn^{3+} , which is present in the soln. in the form of dissociated $Mn_2(SO_4)_3$; at 12-13 N the soln. becomes violet, owing to the disappearance of Mn^{3+} and formation of stable complexes, such as $H_2Mn(P_2O_7)_2$ and $H_2(MnP_2O_7)_2$. Formation of Mn^{3+} begins at an anode potential of 1.8 v. At 2.05 v. a considerable evolution of O_2 begins, the yield decreases from 93.9% to 74.2% and the soln. acquires a dark-red color. At a 0.7 g/l. of Mn^{3+} a dark brown turbidity appears. After filtration the soln. is pale pink and contains 0.1 g/l. of Mn^{3+} . The process is supposed to consist of the following: Mn^{3+} is produced at the anode and forms a complex with SO_4^{2-} . The process $Mn_2(SO_4)_3 + 4H_2O = Mn(OH)_2 + Mn_2(SO_4)_3 + 2H_2SO_4$ takes place simultaneously in the soln.

The insol. $Mn(OH)_2$ transforms most of the Mn^{3+} into Mn^{2+} and Mn^{3+} . A stable equil. is produced with a small concn. of Mn^{3+} in the H_2SO_4 soln. The reduction of Mn^{3+} at the cathode has very little effect on the reaction. Two new methods for the oxidation of org. substances by Mn^{3+} are proposed. (1) $Mn_2(SO_4)_3 + H_2SO_4$ (or $H_2[Mn_2(SO_4)_3] \cdot 3H_2O$) can be used for the production of concn. Mn^{3+} solns. or it can be added in the solid state directly into the reaction vessel. The acidity in the reaction vessel in the latter case does not have to be great (2-3 N) because low concns. of Mn^{3+} are sufficiently stable in this case. Accumulation of acid in the direct addn. of the solid product (0.01 g. of free H_2SO_4 per g. of Mn against the min. amt. of 13 g. when solns. are used). (2) Since the necessary concn. of Mn^{3+} is very small (pale-pink soln. ≈ 1 g/l.) the working soln. can be enriched by the oxidizing agent according to the reaction $MnSO_4 + Mn(OH)_2 + 2H_2SO_4 = Mn_2(SO_4)_3 + 4H_2O$. The acid soln. of $MnSO_4$ (which is the working soln.) circulates continuously through the reaction vessel and the $Mn(OH)_2$ container. The $Mn(OH)_2$ can be obtained by any method, in particular from products by heating it under pressure in a soln. of $NaOH$. (Eight references. W. R. Henn)

Technical
chain Electro-chemistry Moscow Chemic-Tech. Inst. in Mendeleev

ALL-ULSSA METALLURGICAL LITERATURE CLASSIFICATION

1. IRON AND STEEL

2. NON-FERROUS METALS

3. METALLURGICAL ENGINEERING

4. METALLURGICAL APPARATUS

5. METALLURGICAL REACTIONS

6. METALLURGICAL PROBLEMS

7. METALLURGICAL EQUIPMENT

8. METALLURGICAL INSTRUMENTS

9. METALLURGICAL REACTIONS

10. METALLURGICAL APPARATUS

11. METALLURGICAL REACTIONS

12. METALLURGICAL EQUIPMENT

13. METALLURGICAL INSTRUMENTS

14. METALLURGICAL REACTIONS

15. METALLURGICAL APPARATUS

16. METALLURGICAL REACTIONS

17. METALLURGICAL EQUIPMENT

18. METALLURGICAL INSTRUMENTS

19. METALLURGICAL REACTIONS

20. METALLURGICAL APPARATUS

21. METALLURGICAL REACTIONS

22. METALLURGICAL EQUIPMENT

23. METALLURGICAL INSTRUMENTS

24. METALLURGICAL REACTIONS

25. METALLURGICAL APPARATUS

26. METALLURGICAL REACTIONS

27. METALLURGICAL EQUIPMENT

28. METALLURGICAL INSTRUMENTS

29. METALLURGICAL REACTIONS

30. METALLURGICAL APPARATUS

31. METALLURGICAL REACTIONS

32. METALLURGICAL EQUIPMENT

33. METALLURGICAL INSTRUMENTS

34. METALLURGICAL REACTIONS

35. METALLURGICAL APPARATUS

36. METALLURGICAL REACTIONS

37. METALLURGICAL EQUIPMENT

38. METALLURGICAL INSTRUMENTS

39. METALLURGICAL REACTIONS

40. METALLURGICAL APPARATUS

41. METALLURGICAL REACTIONS

42. METALLURGICAL EQUIPMENT

43. METALLURGICAL INSTRUMENTS

44. METALLURGICAL REACTIONS

45. METALLURGICAL APPARATUS

46. METALLURGICAL REACTIONS

47. METALLURGICAL EQUIPMENT

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Effect of temperature on the rate of electrolysis. N. V. Gribacheva (Mendeleev Chem.-Tech. Inst., Moscow). *Zhur. Fiz. Khim.* 20, 898-903 (1946). — The methods of chem. kinetics cannot be applied directly to all processes occurring during electrolysis, as is shown by the temp. dependence of these processes. The first one is the chem. polarization for which a formula is derived by integrating Fick's equation and detg. the integration const.: $C_0 - C = I_{0\infty} \sqrt{4\pi} \cdot (1 - x^2/4Dn)/2\pi F \sqrt{\pi} n D$ (1) where C_0 is the initial concn., I the current, n the cation valency, x the time, x the distance, n the ioniz. transprt. no.; D the diffusion coeff. Substituting the value of C into Nernst's equation, one gets formula (2). By measuring C as a function of x for various C , (1) and (2) are verified in an electrolyzed $ZnSO_4$ soln. Introducing into (2) the polarization potential $\Delta R = R_{pt} - R_{th}$, one gets: $I = 2\pi F C_0 \sqrt{4\pi} D (1 - (Q/\Delta R \pi F / RT)) (1 - n) \sqrt{x}$ (3). Neglecting the function (I) in (3) and setting $D_{pt} = D_{th}$, one gets: $\ln I = A_1 - Q/2RT$ (4), where Q is the activation energy for viscous flow in the soln. Electrolysis of a 0.1 M $NaNO_3$ soln. between 0 and 100° gives a straight line in a plot $(\log I, 1/T)$, the effective activation energy being 302 cal. The second process is the chem. polarization for which chem. kinetics predict a relation similar to (4) but with

much higher values of the effective activation energy E . Straight lines in $(\log I, 1/T)$ diagrams are obtained for the anodic (on Pt) oxidation of benzene in alc. aq. soln. ($E \approx 2370$), chlorides in 3 M $NaCl$ and 0.1 M $NaOH$ soln ($E \approx 11,020$) and oxalic acid ($E \approx 7040$). A third possible process is the polarization due to metallic electrolysis. Taking into account the formation of the new phase, one gets a different relation between $\log I$ and $1/T$; no straight line is obtained, but a curve presenting a max. at $T = T_m$ and $I = I_m$. Data obtained by electrolyzing a 0.1 M $CuSO_4$ soln. at $\Delta R = 0.0271$, 0.0300, and 0.0330 v. give a curve which is fitted by: $\log (I/I_m) = -\alpha \log (T_m/T) - 0.3943 \cdot T_m \cdot T + 0.4340$. Michel Boudart

CA

Autocatalytic phenomena in the electrochemical oxidation
of aniline. M. B. Klin and V. V. Gorbačev (D. I.
Mendeleev Chem.-Tech. Inst., Moscow). *Zhur. Fiz.
Khim.* 34, 1101-4 (1960).—Investigation of the kinetics of
the electrochemical oxidation of PhNH₂ indicates that the re-
action is autocatalytic and occurs by an oxidizing poly-
merization. Paul W. Howerton

GORBACHEV, S. V.
PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

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BOOK

Call No.: AF51006

Authors: IZGARYSHEV, N. A., GORBACHEV, S. V.

Full Title: COURSE OF THEORETICAL ELECTROCHEMISTRY

Transliterated Title: Kurs teoreticheskoy elektrokhimii

PUBLISHING DATA

Originating Agency: None

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PURPOSE: This monograph is intended as a textbook for students of chemical technology. It may also be helpful for engineers and technicians in the field of electrochemistry and electrochemical processes.

TEXT DATA

Coverage: The fundamentals of theoretical electrochemistry are discussed here: Mendeleyev's hydrate theory of solutions, the flow of the current through electrolyte solutions, the theory of strong electrolytes and its adaptation, the phenomena of hydration and solvation of ions, the theory of the origin of electromotive forces, the theories of electrocapillary effects, and the

NOTE: See card for IZGARYSHEV, N. A. for page of the abstract

GORBACHEV, S. V.

USSR/Chemistry - Chlorine

Jul 51

"Effect of Temperature on the Rate of the Process of Electrolytic Evolution of Chlorine," S. V. Gorbachev, N. P. Zhuk, Chem-Technol Inst imeni Mendeleyev, Moscow

"Zhur Fiz Khim" Vol XV, No 7, pp 841-853

Obtained data from investigation of anodic evolution of Cl₂ at Pt-Rh electrode for wide range of electrolyte concns and cd which cannot be fully reconciled with any existing theory. Established linear dependence between log of cd and reciprocal of temp over wide polarization range. Calcd activation energy of process under different conditions, 206726

USSR/Chemistry - Chlorine (Contd)

Jul 51

Making possible detn of nature of polarization (chem or concn). Discusses effect of polarization on activation energy. Proposes anodic reaction mechanism to correspond with obtained data.

206726